

Additions of Headings and Amendments to the Disclosure:

Please insert the following heading before Paragraph 1 at page 1:

-- Background of the Invention --

Please insert the following heading before Paragraph 12 at page 4:

-- Summary of the Invention --

Please replace Paragraph 18 at page 7 with the following rewritten paragraph:

-- The retarding layer in the first sub region of another advantageous embodiment is deposited on the catalyst body as a porous cover layer. With this catalyst system, called a flow-around alternative, the catalyst body in the first and second sub region is formed by a continuous body, meaning this body extends over the first as well as the second sub region. Thus, the complete flow of gaseous mixture flows around the catalyst body. The retarding layer deposited in the first sub region makes it possible in the inflow region to inhibit the diffusion of the reaction gases flowing in and/or out. As a result, the catalytic recombination of the reaction gases is limited, which in turn leads to a limiting of the reaction temperature, even with high H₂ concentrations. The speed of the gaseous mixture flowing over or around the catalyst, which also influences the catalytic reaction, is advantageously influenced by a predetermined housing geometry. The overflow speed of the gaseous mixture preferably is adjusted to 0.1 to 2 m/s in the region of the catalyst system if the housing height is 0.2 to 2 m.--

Please replace Paragraph 19 at page 7 with the following rewritten paragraph:

-- Several identical catalyst systems are advantageously arranged parallel to each other for a particularly high reaction conversion. For the alternative where the gas flows around, for

example, adjacent catalyst systems are arranged parallel to each other with the respectively associated first and second sub regions. In that case, each catalyst system is provided in the first sub region with an associated retarding layer. With the flow-through alternative for the catalyst systems, for example, several identical first sub regions are arranged parallel to each other and are surrounded by a joint retarding layer. The associated second sub regions are separated from the first sub regions and are also arranged parallel to each other. As an alternative, different types of catalyst systems can be arranged alternating. An especially secure and active catalytic recombination in several stages is achieved when using a combination of catalyst systems with a first, a second or several sub regions, wherein a non-retarded reaction occurs in particular in one sub region and a diffusion-retarded reaction in another sub region. As a result of this multi-stage recombination, a particularly secure protection against ignition or flaming with simultaneously high reaction conversion is achieved, even with less explosive gaseous mixtures for the individual sub regions or flow channels.--

Please replace Paragraph 25 at page 11 with the following rewritten paragraph and remove Footnote 4:

-- The gaseous mixture for the flow-through alternative is advantageously guided in the first sub region through the retarding layer, wherein a partial flow of the non-purified gaseous mixture flows through the first sub region where it is purified. This purified gaseous mixture is subsequently mixed with non-purified gaseous mixture in a mixing zone, positioned downstream of the catalyst body, thereby reducing the concentration of explosive reaction gases, in particular the H₂ concentration. ~~This mixed, low concentration,~~^[4 ...] This mixed, low concentration gaseous mixture is then supplied for further catalytic oxidation to the second sub region, which is

not covered by a retarding layer. In the second sub region of the catalyst body, the gaseous mixture consequently has direct access to the catalyst body, which comprises in particular catalytically highly active material. As a result, a higher catalytic conversion occurs in the second sub region, which can be increased further by a catalyst material with higher catalytic activity.--

Please replace paragraph 28 at page 12 with the following rewritten paragraph and remove Footnote 3:

-- The reaction temperature is preferably lower in the first sub region than in the second sub region. In particular, the reaction temperature in the first sub region is below the ignition temperature of the reaction gases. The reaction temperature in the first sub region is preferably less than 560 °C even in the "worst case" and is thus below the ignition temperature for hydrogen. ~~In the second sub region, as a result of the ... that occurred in the first sub region[[....³]]~~ In the second sub region, as a result of the reduction in temperature that occurred in the first sub region, a catalytic material with higher catalytic activity is used than in the first sub region. --

Please insert the following heading before Paragraph 30 at page 13:

-- Brief Description of the Drawings --

Please replace paragraph 30 at page 13 with the following rewritten paragraph:

-- Exemplary embodiments of the invention are explained in further detail with the aid of a drawing. ~~Shown are in:~~

Figure 1 shows a A recombination device for catalytically recombining hydrogen and/or carbon monoxide with oxygen in a gaseous mixture with the aid of a catalyst system.

Figure 2 shows a A sectional detail H of the catalyst system 2 from Figure 1.

Figure 3 shows the ~~The~~ functional course of the concentration and the reaction temperature in dependence on the flow path along the catalyst system.

Figure 4 shows an ~~An~~ alternative recombination device for catalytically recombining hydrogen and/or carbon monoxide with oxygen, in a gaseous mixture with a catalyst system.

Figure 5 shows a A sectional detail V of the first sub region from Figure 4. --

Please insert the following heading before Paragraph 31 at page 14:

-- Detailed Description of the Preferred Embodiments --

Please replace paragraph 31 at page 14 with the following rewritten paragraph:

-- The same reference numbers ~~were~~ are used for matching components in the different Figures.--

Please replace paragraph 41 at page 17 with the following rewritten paragraph:

-- For a particularly secure operation with a possible reversal in flow direction inside the recombination device 1, 1' as a result of the so-called down currents, a down current protection 12 is provided at the upper end of the housing 4, in outflow direction of the gaseous mixture. The down current protection 12 simultaneously serves as a housing roof and thus as a drop-rejecting limitation for the recombination device 1, 1'. Thus, a direct inflow of liquid drops into the recombination device 1, 1' is avoided, even during the operation of a spray system above the recombination device 1, 1'. --

Please replace paragraph 46 at page 19 with the following rewritten paragraph:

-- Figure 3 shows the functional progression of the H₂ concentration K and the reaction temperature T in dependence on the flow path of the gaseous mixture along the catalyst system 2 for the aforementioned "worst case." During the catalyst system 2 operation, the H₂ concentration K in the first sub region T1 is reduced from clearly above 10 % by volume to at least less than 5 % by volume through a catalytic oxidation. In the process, the reaction temperature T remains below 560 °C in the first sub region T1, thus falling below the ignition temperature for the reaction gas at the catalyst system 2.--

Please replace paragraph 48 at page 19 with the following rewritten paragraph:

-- Figure 4 shows the recombination device 1' for an alternative catalyst system 2. The first sub region T1 and the second sub region T2 in this case are arranged separately. The first sub region T1 comprises a multitude of parallel arranged catalyst bodies 6, which are jointly surrounded by the retarding layer 8. For this, the retarding layer 8 is composed of loose bulk material in which the catalyst bodies 6 are arranged. Figure 4 shows that in dependence on the type and function of the recombination device 1', several identical first sub regions 1 can be provided in the flow direction of the gaseous mixture, which are arranged parallel to each other, with an intermediate space 22. Alternatively, it is also possible for different sub regions T1, T2 to be arranged alternately. --